DOCKET SECTION

BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, D. C. 20268-0001

POSTAL RATE AND FEE CHANGES, 1997	:	Docket No. R97-1

JOINT INITIAL BRIEF

OF

ADVERTISING MAIL MARKETING ASSOCIATION,
DIRECT MARKETING ASSOCIATION,
MAIL ORDER ASSOCIATION OF AMERICA,
PARCEL SHIPPERS ASSOCIATION, AND ADVO, INC.

CONCERNING

CITY DELIVERY CARRIER LOAD TIME COSTS

AND

RURAL CARRIER COSTS

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The Advertising Mail Marketing Association, Direct Marketing Association, Mail Order Association of America, Parcel Shippers Association, and Advo, Inc. (the "Joint Parties") hereby submit this Joint Initial Brief to the Commission concerning the proper attribution of (1) city delivery carrier load time costs and (2) rural carrier costs.

SUMMARY OF ARGUMENT

City and rural delivery carrier costs constitute a significant portion of total Postal Service costs. Proper attribution of these costs, both in estimating variabilities and in distributing volume-variable costs to the subclasses of mail, is essential to the development of sound, cost-based rates. In this case, the attribution approaches used by the Postal Service for both city and rural carrier costs are flawed and need to be corrected.

A. City Delivery Carrier Load Time Costs.

In her testimony in response to Commission Notice of Inquiry No. 3 concerning city delivery carrier load time costs, Joint Parties' witness Crowder has demonstrated a major flaw in the current attribution of load time that results in a significant overstatement of volume-variable load time costs. JP-NOI-1. The core problem is a mismatch between the load time variabilities derived from the Load Time Variability (LTV) models, and the much larger, separately estimated accrued load time costs based on the Street Time Survey (STS) to which those LTV variabilities are applied.

Crowder has presented a thorough analysis of the problems with the current attribution approach. Her correct approach, explained in both narrative and mathematical form, is supported by extensive analyses and proofs. As she showed, this core mismatch problem must be corrected either by:

(1) Scaling downward the LTV elemental variabilities (which reflect the variability of the smaller LTV-modeled load time) to mathematically match with the larger STS amount of load time, so that it measures the correct amount of elemental load time; or

(2) Applying the LTV elemental variabilities to the LTV-modeled load time, and treating the remaining STS load time as "fixed time at stop" which is volume variable to the same extent as stops coverage.

Crowder has also presented the correct approach to other aspects of carrier load time attribution, including the treatment of non-elemental load time and the "deliveries effect" at multiple delivery stops. Her correct, integrated approach to load time attribution should be adopted.

B. Rural Carrier Costs.

Rural carrier cost attribution presents a different problem. Here, there is no issue concerning the correct estimate of either accrued or volume variable costs. The problem, instead, lies in the distribution of rural carrier costs to types of mail and subclasses. Unfortunately, because of acknowledged deficiencies and inconsistencies in the available rural carrier databases, there is no simple or clear-cut "correct" distribution key. The choice therefore boils down to selecting the distribution keys that produce the most reasonable result.

Fortunately, there is a clear-cut guideline for judging the reasonableness of the various alternative distribution keys. Rural carrier pay, unlike that for city delivery carriers, is based on route evaluations and piece-handling pay formulas that reflect the actual pay-based cost of handling different types of mail, particularly delivery point sequenced (DPS) letters, other letters, and flats. These rural carrier pay "evaluation allowances" translate into effective pay-based costs-per-piece for each mail type --

providing the best benchmark to gauge the reasonableness of the final distributed costs for each mail type. As USPS rebuttal witness Baron acknowledges, "it certainly would be preferable" for the distributed costs of all types of mail to have "roughly comparable" positive markups over their pay-based evaluation allowance costs. Tr. 17816-17.

The Postal Service's proposed distribution keys, both in its original filing and as modified in Baron's rebuttal testimony, fail this test of reasonableness. Baron's rebuttal distribution keys, for example, produce a *negative* markup for DPS letters (i.e., a distributed cost that is *less* than the actual pay-based evaluation allowance for handling DPS mail), while producing excessive positive markups for non-DPS letters and flats -- a result that Baron conceded on cross-examination "is certainly a cause for concern." Tr. 17816. More than a "cause for concern," this clearly erroneous result is simply unacceptable and greatly skews the distribution of rural carrier costs among the subclasses.

MPA witness Glick and Advo witness Crowder, on the other hand, have clearly identified the many serious problems with the USPS-proposed distribution keys. They have presented reasonable alternatives to the flawed USPS distribution keys for flats and letters that mitigate these serious markup disparities, producing distributed rural carrier costs that are much more closely in line with the actual pay-based rural carrier evaluation allowances. Consistent with Baron's own benchmark for reasonableness -- roughly equivalent markups over evaluation allowance unit costs -- their proposals should be adopted.

ARGUMENT

I. ATTRIBUTION OF CITY DELIVERY CARRIER LOAD TIME COSTS IS SUBSTANTIALLY OVERSTATED.

A. Introduction And Background.

1. The Traditional Approach To Load Time Attribution.

The current Commission-approved costing approach for city carrier load time was established in R87-1. Significantly, this approach derives estimates of accrued load time and volume variabilities from different sources. Accrued load time costs are estimated using the Street Time Survey (STS) as a source, applying STS load time proportions to total out-of-office time by route type. Load time variabilities are estimated from a separate source: the Load Time Variability (LTV) models to which base year carrier cost system (CCS) stop and volume data are applied to develop variabilities. The LTV/CCS-based variabilities are then applied to the separately-estimated STS accrued costs to develop attributable volume-related elemental load time costs and stops- or coverage-related load time costs.[1]

Traditionally, the LTV and CCS models have been used only to identify load time variabilities, although as Crowder pointed out, there is an "implicit" accrued LTV load time that is necessarily associated with those variabilities, stemming from the marginal

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[1] The STS load time proportions were derived from a data collection where carriers were remotely beeped at sampled instants and then self-recorded the activity they were engaged in at the time. The LTV models were developed from an industrial engineering study that observed carriers handling live mail at delivery stops. There are three LTV stop-type models: single delivery residential (SDR), multiple delivery residential (MDR), and business and mixed (B&M). Elemental load variabilities and residual non-elemental (stops-coverage, or coverage-related) variabilities are derived from the city carrier cost system (CCS) stops coverage models for the same three stop types. Both elemental and coverage-related variabilities are measured in accordance with the Commission's point estimate at mean volume approach, applying mean-volume-per-actual-stop data from the base year CCS.

and average stop costs from which the variabilities are calculated. Tr. 16203-04, 18431-32.

2. The Approaches Presented In This Proceeding.

In his initial testimony, USPS witness Baron (USPS-T-17) followed the traditional load time attribution approach of applying LTV/CCS variabilities to separately-estimated STS accrued costs, but he offered two other modifications. First, he proposed that a small portion of STS accrued load time be considered as "fixed time at stop" and treated as access time. Second, he proposed a modification to the treatment of variability on multiple-delivery residential (MDR) and business and mixed (B&M) routes to capture what he termed a separate "deliveries effect" on costs.

On January 12, 1998, the Commission issued Notice of Inquiry No. 3 (NOI 3) relating to Postal Service witness Baron's proposed treatment of city delivery carrier load time. The Commission requested comments on "the appropriateness of these and other possible changes to the established approach to measuring the variability of load time." NOI 3 at 1.

On February 2, 1998, the Joint Parties filed comments in the form of proffered testimony of witness Crowder (JP-NOI-1), together with a motion requesting that the Commission "accept testimony and establish on-the-record hearing procedures to consider issues concerning city delivery carrier load time cost issues." In her testimony, Crowder:

(1) described a serious overstatement in attribution of load time caused by a mismatch between the LTV modeled load time costs from which variabilities are derived and the much larger separately-estimated STS accrued costs to which those variabilities are applied;

(2) explained that Baron's "fixed time at stop" adjustment, while a step in the right direction, only partly corrected for this overstatement;

(3) presented narrative and mathematical descriptions of the correct approach to attribution of system-level load time costs; and

(4) explained that the separate "deliveries effect" adjustment proposed by Baron is incorrect because this effect is already captured in the current variability formulation.

The Postal Service also filed comments to the NOI, including a statement by witness Baron addressing aspects raised by the NOI. By Ruling No. R97-1/95, the Presiding Officer established a hearing date for receipt of both Crowder's testimony and Baron's response to the NOI, and provided for discovery.

On February 25, 1998, five days before the hearing, the Presiding Officer issued a "Notice Concerning Likely Areas of Inquiry At The Hearing" that, among other things, presented three mathematical "propositions" related to Crowder's mathematical description of load time variability. Crowder prepared a written response to this notice, distributed to interested parties and the Commission prior to the hearing. In her written response, she explained that:

(1) Proposition 1 correctly described the proper mathematical model for determining load time attribution;

(2) Proposition 2 correctly recognized the necessity for a proper match between the load time variabilities and the accrued costs to which those variabilities are applied;

(3) Proposition 2, however, incorrectly assumed that fixed stop time was subtracted from LTV modeled time. Rather, the STS accrued load time effectively adds fixed stop time to the LTV time, thus requiring that the elemental load variabilities calculated from the LTV models be reduced; and

(4) Propositions 2 and 3, when properly applied, conclusively proved her point that the mismatch between LTV variabilities and STS accrued costs necessarily overstates attributable load time costs.

She further explained that the mismatch must be corrected either by (1) applying the LTV variabilities to LTV-derived accrued costs and treating the excess of STS over LTV costs as coverage-related costs, or (2) reducing the LTV variabilities to correspond mathematically to the larger STS accrued costs, as shown in her response to Commission Proposition 2. At the hearing, Crowder's written response, together with

her testimony and Baron's statement in response to the NOI, were received into evidence.

On March 9, 1998, rebuttal testimony relating to load time issues was filed by Advo witness Crowder and USPS witness Baron. Hearings were held on that testimony on March 17 (Baron) and March 18 (Crowder).

B. The Current And USPS-Proposed Approaches Seriously Overstate Volume-Variable Load Time Due To The Mismatch Between Variabilities And Accrued Costs.

In one respect, Baron's approach represents an improvement over the current, seriously flawed approach to load time attribution. His adjustment for "fixed time at stop," treating a portion of STS load time as access time (USPS-T-17 at 9-15), correctly recognizes the existence of fixed stop time in STS load time costs, but does not go nearly far enough. The core problem is the mismatch between the STS-estimated accrued costs and the LTV-derived elemental load variabilities.

Crowder demonstrated that the STS average stop load time is much greater than the LTV average stop load time, from which the LTV elemental variabilities are derived. She explained that this is due to the STS versus LTV differences in (a) the operational definition of load time, and (b) the manner of data collection.[2] Accordingly, the greater STS load time amount includes not only the load time associated with the LTV operational definition of load time, but also fixed stop time (either load- or access-

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2 The STS data collection, where carriers self-reported their activities at specific instants of time, had a broader definition of load time than did the LTV data collection, where carrier activities were observed and recorded by trained USPS industrial engineers. Tr. 16202-03. The STS definition included such broad categories as "to, from, or at delivery not routine," "at delivery stop - curbline," and "at delivery stop - not curbline." In contrast, the LTV definition was narrower and more precise, was measured by trained USPS industrial engineers at the sight of the observation, and did not begin until the carrier actually handled mail or mail-related equipment, or actually began serving the customer. Tr. 16205-09, 16257-59. The difference is principally fixed time carriers spend "at the delivery stop." Tr. 16206-07, 16192, 16203.

related) which should be treated as variable to the same extent as stops coverage. Tr. 16201-09.

Crowder proved mathematically that the LTV variability must match the volume and average time from which it was derived; otherwise, the resulting elemental load costs are incorrect. When the LTV elemental variabilities are applied to the much larger STS-estimated load time, they substantially overstate the true amount of elemental load time. Baron's separate removal of a small amount of fixed stop time from the STS load time estimate only slightly moderated this overstatement, but does not at all address the core problem. Tr. 16185, 16201, 16203-05.

Baron, in rebuttal, agreed that the discrepancy between model-based and STS-based costs "is a serious concern," which he then brushed off as "requiring further evaluation." Tr. 17720. He then confused the issues by mischaracterizing Crowder's testimony and claiming that her mathematical model was "invalid" and must be "rejected." Tr. 17726-38. His rebuttal arguments were disproven in cross-examination:

Jensen's Inequality -- "not all inequalities are equal." First, Baron claimed that Crowder's mathematical model of load time, measured by multiplying total stops times the load time at a stop receiving the systemwide average volume per stop (consistent with the Commission's approved approach for measuring variabilities at the mean-volume level), was mathematically "not equal" to "true" load time, measured by multiplying total stops times the average load time over all stops. He expressed this mathematically as:

$$E(g(x)) \neq g(E(x)), \text{ or}$$

True load time is *not equal* to Crowder's load time.

Tr. 17736-37. From this, he argued that Crowder's mathematical model and the Commission's models in its three Propositions were "invalid" and must be "rejected." Tr. 17738.

In cross-examination, however, Baron conceded that under the mathematical rule he cited, Crowder's model produces a total load time that is *greater than* true load time.[3] Stated mathematically, the true relationship is:

$$E(g(x)) < g(E(x)), \text{ or}$$
True load time is *less than* Crowder's load time.

Crowder's model thus produces a "conservative" result that *overstates* accrued load time for purposes of determining elemental load time. Obviously, it would make no sense to "reject" Crowder's conservative, overstated result as "invalid," in favor of the mismatched and greatly more overstated STS-based cost estimate. Baron's "inequality" argument is, in reality, further proof of both the soundness and reasonableness of Crowder's approach.

Mischaracterization of excess STS time as "access" time. Second, Baron mischaracterized Crowder's testimony, claiming that she proposed to treat the excess of STS over LTV-modeled load time as "access" time rather than coverage-related load time. USPS-RT-1 at 10-12, Tr. 17727-28. On cross-examination, Baron conceded that his characterizations of Crowder's testimony were based on his interpretations rather than her statements. Tr. 17784-90. Crowder subsequently reaffirmed what she had said all along (but misinterpreted by Baron):

> "[W]hat makes the most sense to me is that that excess [of STS over LTV modeled load time] is truly time at the stop, whether you want to call it load or you want to call it access, it doesn't matter. It's -- it was time that the carriers were spending at stops. But it was not time that

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[3] Tr. 17778-83. The result of this mathematical rule, known as Jensen's Inequality, is that for a concave cost function like load time, the cost evaluated at the mean-volume stop level times total stops is always greater than the cost evaluated as the average cost per stop times total stops, or: $E(g(x)) < g(E(x))$ [the latter term representing Crowder's mathematical model]. Tr. 17780-83. Baron acknowledged that this direction of the "inequality" he cited is confirmed by the very source he cites, Estimation and Inference in Econometrics, by Davidson and MacKinnon, at 800. Id.

> was included in the LTV time. Since the LTV time includes all of the elemental time, it seems appropriate to treat the rest -- the difference between LTV and STS as load time, but just call it fixed time at the stop." Tr. 18435.

Crowder also confirmed that this excess STS cost would be treated the same whether considered as access or load time, by attributing on the basis of stops- or coverage-related variability. Tr. 18435-36. In sum, Baron's misinterpretation and confusion about the load-versus-access nature of the excess STS cost is of no consequence to the final attribution result.[4]

Confusion on "fixed time at stop." Third, Baron confused the relationship of "fixed time at stop" with respect to LTV modeled load time. Baron viewed LTV time as not including any fixed stop time. Tr. 17726-27, 17729-30. Crowder, by contrast, viewed non-elemental or coverage-related LTV time as including some fixed stop time (e.g., that associated with opening the satchel, opening and closing mail receptacles, etc.), which is variable with respect to stops-coverage. Despite the fact that she clearly explained "fixed time at stop" in response to USPS interrogatories (Tr. 16233-40, 16247-53, 16255-56, 16261-62), Baron has continued to misinterpret her testimony based on his own different use and interpretation of the term.

Baron further confused the issue by claiming that LTV model-based accrued cost is, by definition, "entirely a function of volume" and that no portion can be considered coverage-related. Tr. 17729-30. This claim is refuted by the LTV model itself. The elemental variabilities come from the model, and reflect the extent to which LTV stop

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[4] As Crowder explained, the differences in the definitions of load v. access time in the STS and LTV studies raise the possibility that some of the excess STS time was really access-related rather than load-related. Tr. 16202-09. Whether technically access or load, this excess STS time was non-elemental time related to a particular stop (or "fixed time at stop"), and in either case, the attribution of this cost on the basis of stops- or coverage-related variability would be the same.

load time varies with volume at a stop. Elemental load time from those variabilities is less than total LTV-modeled load time, with the remainder being *non-elemental*, or in Crowder's terms, coverage-related load time. As she clearly explained, this non-elemental portion of LTV time is volume-variable to the same extent as stops is considered volume-variable, as derived from the CCS stops coverage model.[5] It is Baron's refusal to acknowledge that LTV load time includes some fixed stop time, that coverage-related load time is volume-variable to the same extent as stops-coverage, and his misunderstanding of Crowder's approach, that is the root of confusion.[6]

C. Baron's "Deliveries Effect" Analysis Is Incorrect And Over-Attributes Load Time Costs.

For purposes of evaluating elemental variability, Baron converted the possible deliveries variables in the LTV MDR and B&M models into actual deliveries. He then derived elemental variability with respect to the shape-volume (elemental) variables. He also derived a "deliveries effect variability" of load time. This latter was "derived" using the *possible deliveries* coefficients with the CCS *actual deliveries* values. USPS-T-17 at 16-19. Thus, he identified elemental load time with respect to each of the elemental variables and, separately, a "deliveries effect" load time as well. These elemental and "deliveries effect" variabilities were then multiplied by the remaining (non-

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5 Under no circumstance could the total of LTV load time be deemed 100% elemental load. The variabilities from the model demonstrate that the load function is less than 100% volume-variable, consistent with the known concavity and declining marginal cost nature of the load time cost function.

6 Baron also raised the specter that adoption of Crowder's load time approach would "mandate" abandonment of STS proportions for street activities and "unavoidably disrupt[ ] the entire STS system" for apportioning street time among functions. Tr. 17731-32. Crowder's approach would do no such thing. All that her approach implies is that the excess STS time may be a mixture of non-elemental load time and possibly some stop-related access time, which in either case is treated as "coverage-related" cost. It does not in any way undermine the STS combined estimate of load-plus-access time or otherwise implicate the use of STS for other street activities.

fixed stop) STS load time. This yielded Baron's elemental and "deliveries-effect" load times. The latter he considered volume-variable to the same extent as deliveries-coverage. Id. at 7-9, 16-23.

Crowder proved that Baron's deliveries effect is incorrectly identified and estimated. She demonstrated that the deliveries effect Baron tried to capture is already subsumed in the elemental variabilities. The multiple delivery LTV models, which include both volume and possible deliveries variables, fully capture the stop volume effect on number of actual deliveries at the stop. Thus, Baron's volume-variable deliveries load time essentially double-counts the deliveries effect already included within elemental load time. Further, Crowder proved that substituting actual deliveries for possible deliveries when evaluating variabilities from the LTV models overstates the elemental variabilities. For these reasons, Baron's deliveries effect analysis should be rejected. The LTV elemental variabilities and the LTV modeled systemwide load time should both be estimated using the possible deliveries variables as they were intended -- as possible deliveries, not actual deliveries. Tr. 16217-21, 18438-39.

In his rebuttal testimony, Baron attempted to prove "mathematically" that Crowder's deliveries analysis was wrong. However, cross-examination revealed that the problem is in Baron's analysis, not Crowder's. Baron began his "mathematical proof" by presenting a load time equation (his Equation 5) that correctly identified load time as being a function of both volume (V) and possible deliveries (PD). USPS-RT-1 at 24, Tr. 17740. Thus, he acknowledged that actual deliveries (D) are caused by both volume and possible deliveries, and that both variables are already reflected in the LTV model. This is precisely Crowder's point in her direct testimony: actual deliveries are already explained by the coefficients associated with the V and PD variables in the LTV model. Not recognizing that he had proven her point, Baron simplistically claimed that possible deliveries "can be viewed as actual deliveries." Id. He proceeded to directly substitute D for PD in developing his Equation 5a, magically transforming load time into

a function of volume and actual deliveries (rather than possible deliveries). Id. at 24, 27, Tr. 17740, 17743. He then tried to use this erroneous Equation 5a to "disprove" Crowder's point.

On cross, Baron conceded that (1) his Equations 5 and 5a are not equivalent, (2) the difference in the equations is his substitution of actual deliveries for possible deliveries, and (3) his substituted term, actual deliveries, is really a function of both volume and possible deliveries. Tr. 17793-94. He further conceded that his Equation 5a can be rewritten to substitute the term F(V,PD) for his deliveries term D, to reflect this functional relationship of actual deliveries to volume and possible deliveries. Tr. 17794-95. This substitution invalidates Baron's mathematical proof and reconfirms Crowder's. Tr. 16217-21.

Baron's related argument that Crowder's model erroneously defines actual deliveries solely as a function of volume, ignoring the possible deliveries effect on actual deliveries, was also disproven at the rebuttal hearings. Baron conceded that his conclusion was based on his assumption that Crowder's term, $bv - cv^2$, ignored the effect of possible deliveries on actual deliveries. Tr. 17795-96. As Crowder explained, her term does indeed capture the possible deliveries effect through the coefficient term "b." As possible deliveries increase or decrease, "the possible deliveries effect, which is embedded in the B variable, shifts that curve up or down given the number of possible deliveries." Tr. 18438-39. She further explained:

> "The B variable and the C variable also can be used to develop the marginal volume effect on actual deliveries. They are both in that equation. And in fact if you take that equation with the rest of the material that is in [JP-NOI-1] Attachment C, you can transform it to be exactly the LTV model equation where D equals the possible deliveries, not the actual deliveries. Volume and possible deliveries explain actual deliveries. Volume and possible deliveries are in the LTV model." Tr. 18439.

In sum, Crowder has demonstrated not only that the LTV multiple delivery models reflect the load time effects from both volume and possible deliveries, but that

the coefficients associated with the volume variables include the actual deliveries effect on stop load time. Thus, the elemental variabilities already include the "deliveries effect," and no additional "deliveries" variability should be added. Baron's extraneous "deliveries effect" adjustment must therefore be rejected.

D. Crowder's Approach Properly Corrects The Proven Overstatement Of Attributable Load Time Costs.

Crowder presented a thorough, integrated, consistent, and correct approach to load time analysis. She identified the serious mismatch between the LTV elemental variabilities and the STS load time estimate. Applying the LTV elemental variabilities to the STS load time causes a substantial overstatement of elemental load time and an understatement of coverage-related load time. She showed that the problem must be corrected in either of two ways, both of which reach the same result:

(1) If applied to the much larger STS measure of load time, the LTV elemental variability (which reflects the variability of the smaller LTV-modeled load time) must be mathematically scaled downward to measure the correct amount of elemental load time; or

(2) The LTV elemental variability should be applied to the LTV modeled load time to derive elemental load time, with the excess of STS over LTV modeled time being treated as "fixed time at stop" which is volume variable only to the extent as stops coverage.

Tr. 16191-93,16203-05, 16226-28.

Both methods are straightforward. The first method, following the general concept in the Commission's Propositions 2 and 3 (as clarified and corrected by Crowder), mathematically scales the LTV variabilities downward to match the larger STS accrued cost base. Tr. 16204-05, 16226-28. The second method is presented by Crowder in her initial NOI testimony. Tr. 16191-92, 16204-05. Under no circumstance can the LTV elemental variability be applied, unadjusted, to the STS estimate of accrued load time. There must be a correction of either the variability or the estimate of accrued load time -- as confirmed by the Commission's own concepts in Propositions 2 and 3 and Crowder's response to those Propositions. Tr. 16174-75, 16225-28.

II. THE USPS RURAL CARRIER COST DISTRIBUTIONS ARE SKEWED.

A. Introduction And Background.

1. Rural Carrier Pay, Variability, And Cost Distribution.

Rural carriers on evaluated routes (which comprise more than 90 percent of rural salary costs) are paid on the basis of the amount of work they perform, taking into account the types of mail they handle. This workload and pay is determined through individual route evaluations. In the evaluation process, rural carriers are credited with time for each mail piece they handle, based on specified evaluation factors (minutes per piece) that differ for each type of volume they handle (*e.g.*, a lower evaluation factor for DPS/Sector Segment letters, a higher factor for regular non-DPS letters, and a still higher factor for flats, etc.).[7] This volume-related evaluated time, coupled with allowances for various non-volume-related route characteristics such as number of boxes and mileage, determines the carrier's total pay. In total, these route evaluations constitute the National Mail Count (NMC),and produce mail volumes by mail type -- but not by subclass. Most importantly, the NMC data are the basis upon which rural carrier pay is established.

For ratemaking purposes, the NMC data are used to determine the volume-variable portion of rural carrier costs, based on the proportion of volume-related evaluated cost to total evaluated cost. Volume-variable rural cost is identified for each type of volume. The evaluation factors for each type of volume, in minutes per piece, can be used to calculate the actual "evaluation allowance" cost per piece by mail type. This evaluation allowance cost per piece represents the actual amount of pay which rural carriers receive for handling a particular type of mail.

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7 DPS and Sector Segment letters are variously referred to in the record as "DPS/Sector Segment" or "DPS/SS." For simplicity, in this brief they are referred to collectively as "DPS," unless the context requires separate identification.

However, because the NMC collects data only by mail type, but *not* by subclass, subclass-specific distribution keys must be developed at least in part from other sources. The USPS uses the Rural Carrier Cost System (RCCS) as its source for distribution keys for these individual volume-type cost pools. The RCCS, however, has two flaws, both of which have been acknowledged by the USPS.

The first flaw is that the NMC identifies and evaluates, for cost purposes, certain types of letters as flats, while the RCCS identifies them as letters. If left unadjusted, use of the RCCS as a key would overstate letter volume and understate flat volume, distributing too much rural flat cost per piece and too little rural letter cost per piece among the individual subclasses, and skewing the distribution of cost among subclasses. In this and previous cases, the USPS has *attempted to correct* this problem by shifting some letter volume into flat volume so that volumes and costs by NMC shape correctly match. R90-1, USPS-T-13, Appendix F at F-26-28; R97-1, LR H-193, Tr. 17751-52.

The second flaw is that the NMC individually identifies and evaluates three types of letter mail -- regular (non-DPS) letters, delivery point sequenced (DPS) letters, and sector segment sequenced (SS) letters -- while the RCCS only identifies letters in total. Tr. 17797. Thus, the distribution of regular, DPS, and SS letter costs among the subclasses cannot be accurately performed. Only in the rebuttal phase of this case did the USPS *even recognize or attempt* to correct this separate problem. Tr. 17753-56. But, its *attempted* correction also inappropriately skews the distribution of rural cost among subclasses.

2. <u>Cost Distribution Approaches In This Proceeding</u>.

In its direct case, the Postal Service did not present a witness that directly addressed the distribution of rural carrier costs among subclasses, although its costing analysis included a methodology that attempted to reconcile acknowledged data

problems in allocating costs among rural carrier volume categories (e.g., DPS letters, regular non-DPS letters, and flats) and in distributing those costs to mail subclasses.

In his direct testimony, MPA witness Glick identified a problem with the distribution of rural carrier costs between letters and flats which results in over-attribution of costs to flats, and he proposed a correction. MPA-T-3. He also surfaced the DPS/non-DPS letters allocation problem.

On rebuttal, USPS witness Baron acknowledged problems with the USPS distribution of rural carrier costs, but he ignored Glick's flats correction and instead proposed a new methodology that he claimed more accurately allocated DPS and non-DPS letter costs among volume types and subclasses. USPS-RT-1 at 38-40.

Separately, Advo witness Crowder in her rebuttal to NAA witness Donlan explained two flaws in the USPS initial distribution of rural carrier letter costs. First, "the non-DPS letters cost is distributed on the basis of total letters (including Sector Segment and DPS letters)," resulting in "the ECR non-DPS letter cost being too low." Second, the Sector Segment/DPS letters cost is distributed with a faulty key "which does not recognize the substantial numbers of ECR letters that are DPS." She presented an alternative method for distributing rural carrier costs, aggregating DPS and non-DPS letters, that would mitigate this flawed distribution. ADVO-RT-1 at 34, n. 1, Tr. 18342.

B. Flaws In The Rural Carrier Letters Distribution Keys.

1. The USPS Original And Revised Letter Distribution Keys Are Both Flawed.

Because rural carriers have separate evaluation factors for each of three types of letters -- regular (non-DPS), DPS, and SS letters -- there are separate rural carrier letter cost pools associated with each letter type. This requires separate distribution keys that are correctly associated with the separate letter cost pools. Unfortunately, the RCCS collects data only for letters in total, without separate data or distribution keys for the three component types of letters.

In its direct case, the USPS distributed regular (non-DPS) letter cost on the basis of *total* RCCS letters, while it distributed DPS letter cost on the basis of a key it developed from MC95-1 and MC96-2 systemwide DPS volume data. This is obviously incorrect. The distribution key for non-DPS letter cost should include only non-DPS letters, otherwise the per piece distributed cost is too small. Further, DPS letters were attributed not only the per piece non-DPS letter cost but also the DPS letter cost.[8]

In rebuttal, USPS witness Baron acknowledged the flawed letter keys and offered a correction. But his "correction" greatly over-corrects for this flaw, and causes its own set of problems which Baron ultimately admitted upon cross-examination. Tr. 17816-17, 17827-29. The letter distribution keys he proposed are the same systemwide volume proportions from Dockets MC95-1 and MC96-2. Tr. 17754, 17825. These *systemwide* DPS proportions, which include volume on city delivery routes, do not accurately reflect DPS proportions on rural routes alone. The Postal Service's DPS initiatives have been focused on larger delivery units in the system (and on rural routes, only at those units with "city style addressing"). USPS-T-4 at 9 (Moden). Thus, rural route DPS proportions are likely lower than the system average. Yet Baron applied these old, systemwide subclass DPS proportions to the RCCS subclass letter volumes.

The proof that Baron's letter distribution keys are erroneous comes from a comparison of his resulting distributed per-piece costs with the actual pay-based evaluation allowance per-piece costs. As he confirmed on cross-examination (Tr. 17813-16), his resulting unit distributed cost for DPS letters is actually *less than* the pay-

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8 This is a separate problem which has no impact on the correct amount of rural *flat* cost and volume that MPA witness Glick identified, as discussed in Section II.C. below.

based unit evaluation allowance cost, whereas his unit distributed costs for non-DPS letters and for flats substantially exceed their unit evaluation allowance costs:[9]

	Allocated/ Distributed Cost Per Piece	Evaluation Allowance Cost Per Piece	Markup Over Evaluation Allow. Cost
Letters Delivered	3.16¢	2.78¢	13.8%
Flats Delivered	5.73¢	4.97¢	15.3%
DPS Letters	1.29¢	1.34¢	(3.7%)

Baron's flawed distribution key thus results in a cost distribution to DPS letters that is less than the cost upon which the carriers are paid. Tr. 17816. Conversely, non-DPS letters (and flats) receive an excessive cost distribution substantially greater than their actual pay-based cost. Baron conceded that this negative markup on DPS letters "is certainly a cause for concern," and that "it certainly would be preferable" for all three types of mail to have "roughly comparable" positive markups over their pay-based evaluation allowance costs. Tr. 17816-17.

The problem lies in the demonstrably faulty DPS distribution keys. Using those keys, Baron shifted too much volume away from non-DPS letters and into DPS letters. Tr. 17836-37. This is because the systemwide DPS proportions he used overstate rural delivery proportions, as reflected in the NMC data. Tr. 17837-38. Consequently, his DPS key results in overstated non-DPS letter unit distributed cost and understated DPS letter unit distributed cost. Tr. 17814-16, 17824-25.

The problems with Baron's letter distribution keys do not end here. The source for his DPS distribution keys, systemwide DPS data from MC95-1 and MC96-2, showed

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9 In his Table 1 (USPS-RT-1 at 40, Tr. 17756), Baron showed only data for "Letters Delivered" and "Flats Delivered" (reproduced above), but did not show data for "DPS/Sector Segment." The above table includes data for DPS/Sector Segment, derived in Advo's cross-examination exhibit RXE-1 from Baron's Exhibit USPS-RT-1A. Tr. 17814. Baron confirmed the accuracy of this table. Tr. 17814-16.

no DPS volumes for either the ECR or Periodicals subclasses. Yet he conceded that both ECR letter automation mail and ECR letter non-automation mail are DPS-processed, and that the volumes of such excluded DPS mail could be substantial. Tr. 17799-809. Not only is Baron's proportion of total rural DPS mail overstated, but his proportion of ECR and Periodicals DPS mail within that total is understated. The former results in all non-DPS letters in all subclasses being charged a too-high unit cost, while the latter compounds the problem by not giving ECR and Periodicals credit for lower-cost DPS letters in their subclasses. Tr. 17800-03, 17830-31. As a corollary, by incorrectly distributing zero DPS savings to these subclasses, he also incorrectly distributed DPS cost savings among the other subclasses. Tr. 18342.

These erroneous letter distribution problems also infect the costs for flats, resulting in a too-high cost distribution. Redistributing Baron's DPS and non-DPS letter volumes to equalize their markups over evaluation allowance costs would not solve the problem. Such a redistribution would indeed lower Baron's excessive 13.8% markup on non-DPS letters, but that would also widen the gap between the non-DPS letter markup and the excessive 15.3% flat markup shown above and in Baron's Table 1. The only way to fix this disparity would be to reduce the markup for flats, in order to achieve comparable markups for all three mail types -- a result that Baron agrees "certainly would be preferable." This latter adjustment should be made through MPA witness Glick's correction to the flats distribution key, discussed in section II.C. below.

2. Crowder's Correction To The Letter Distribution Keys

ADVO witness Crowder explained in rebuttal that there simply are no data that can be used to identify individual non-DPS and DPS rural letter volumes by subclass. Tr. 18342. Baron cannot disagree, since the best he could come up with are old systemwide data that omit DPS volumes for some subclasses. Yet his DPS/non-DPS letter distributions are clearly erroneous and unreliable, producing an unacceptable negative markup for DPS letters and an excessive markup for non-DPS letters.

Crowder therefore proposed that the rural non-DPS plus DPS letter cost pools be summed together and distributed on the basis of the RCCS total letter volume, as corrected by MPA witness Glick. This approach would mitigate the huge disparities in cost markups produced by Baron's rebuttal approach, which substantially overcharge non-DPS letters and flats. It is also the only reasonable way to spread the DPS rural cost savings to all automation-rate and automation-compatible letters. Tr. 18342.

Crowder explained that this is especially necessary for non-automation-rated ECR letters. These letters are attributed considerable additional mail-processing cost to enable the Postal Service to include them within the DPS mailstream and thereby generate sufficient "critical mass" to acquire systemwide DPS cost savings. They receive little, if any, benefit from being included in the DPS mailstream, but their presence in that mailstream confers great benefits to the system. Accordingly, any additional DPS mail processing costs attributed to them should, at a minimum, be offset by DPS delivery cost savings. Tr. 18342-43, 18405-09. Crowder's rural carrier letter distribution key should be adopted as the only reasonable approach to solving this problem.

C. Flaws In The Rural Carrier Flats Distribution Key.

1. The USPS Rural Carrier Flats Distribution Key Is Flawed And Over-Attributes Costs To Flats.

Focusing on the USPS-acknowledged disparity between NMC and RCCS flat and regular (non-DPS) letter volume counts, MPA witness Glick explained that, although the USPS has *attempted* to correct the letter-flat disparity, it has not done so. MPA-T-3. Even after factoring DPS letters into his analysis, Glick demonstrated that the letter-flat volume disparity in the USPS proposal remains. His comparison shows that the USPS per piece "markup" -- the ratio of distributed cost to actual evaluated cost for each shape -- is only 9.6% for non-DPS letters compared to 15.3% for flats. USPS/MPA-T3-3. As he explained (and as Baron ultimately agreed), the

markups should be relatively equal. But the USPS-proposed markups are not; they produce a disproportionately high markup for flats. The net effect is that the RCCS distribution keys under-attribute cost to each letter piece and over-attribute cost to each flat piece, skewing rural cost distribution among the subclasses. MPA-T-3 at 9.

2. Glick's Correction To The Flats Distribution Key.

Glick corrected this letter-flat disparity problem. His correction equalized the ratios of per piece distributed cost to evaluated cost for each volume type. MPA-T-3 at 9, and Exhibits MPA 3-1,3-2, and 3-3.

On rebuttal, USPS witness Baron ignored Glick's flats correction, claiming the whole "problem" was solely with the letter distribution keys (a problem which, as discussed above, he has failed to solve). He adopted the USPS original (but flawed) flats distribution key. Tr. 17752-53, 17829. Yet there is a problem in both his letters and flats distribution keys. Since both the letter and flat keys are wrong, the letter and flat "mark-up" figures he used to rebut Glick are also wrong.[10] Glick has demonstrated and corrected this disparity.

On cross-examination, after recognizing these unreasonable results, Baron could not whole-heartedly support his flats distribution key. Tr. 17823, 17828-29. Glick's flats distribution key should be adopted in full. Not only is his flats key based upon the only reliable rural carrier volume data (the NMC data), but it also generates far more reasonable results, consistent with the reasonableness criterion specified by Baron himself -- relatively equal markups of distributed over evaluated cost. Tr. 17751-52, 17816-18, 17823-24, 17827.

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10 This explains the flaws in Baron's Tables 1 and 2 in rebuttal to Glick. Tr. 17756, 17758. In both tables, Baron removed too much volume from non-DPS letters using his DPS letter distribution key, which causes his non-DPS letter "markups" to be higher than they really are. The markups are incorrect; they are simply artifacts of his flawed DPS distribution key.

CONCLUSION

For the above stated reasons, the Joint Parties urge that the Commission adopt (1) the city delivery carrier load time attribution approach set forth in Joint Parties witness Crowder's testimony, and (2) the adjustments to the rural carrier cost distributions set forth in the testimonies of MPA witness Glick and Advo witness Crowder.

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CERTIFICATE OF SERVICE

I hereby certify that I have on this date served the foregoing document upon all participants of record in this proceeding in accordance with section 12 of the Rules of Practice.

Thomas W. McLaughlin

April 1, 1998